

U.S.S.N. 10/042,996
Filed: January 9, 2002
AMENDMENT &
RESPONSE TO OFFICE ACTION

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A microchip device array for the controlled release or exposure of reservoir contents comprising:

two or more microchip device elements, each of which includes a plurality of reservoirs which contain molecules for controlled release or components for selective exposure; and

a means for flexibly connecting said device elements, so as to form a flexible array which can conform to a curved surface.

2. (Original) The microchip device array of claim 1, wherein the means for flexibly connecting comprises a flexible supporting layer attached to a surface of the device elements.

3. (Original) The microchip device array of claim 2, wherein the flexible supporting layer comprises a polymer.

4. (Original) The microchip device array of claim 3, wherein the polymer is selected from the group consisting of polyimides, polyesters, parylenes, and hydrogels.

5. (Currently Amended) The microchip device array of ~~claim 1~~ claim 2, wherein the flexible supporting layer is porous or permeable to molecules releasable from the reservoirs or provided with one or more apertures through said flexible supporting layer.

6. (Original) The microchip device array of claim 1, wherein the means for flexibly connecting comprises one or more hinges or flexible leashes connecting two or more of the device elements.

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7. (Original) The microchip device array of claim 1 for implantation onto or into a patient, wherein the array can conform to the curvature of a tissue surface.
8. (Original) The microchip device array of claim 7 for implantation into or onto the eye of the patient, wherein the tissue surface comprises ophthalmic tissue.
9. (Original) The microchip device array of claim 7, wherein the tissue surface is selected from the group consisting of the stratum corneum, mucosal membranes, blood vessels, bone, brain, and bladder.
10. (Previously Presented) The microchip device array of claim 1, wherein the microchip device elements further comprise a plurality of discrete reservoir caps over the molecules in the reservoirs, wherein each reservoir cap controls release of the molecules from one of the reservoirs.
11. (Original) The microchip device array of claim 1 further comprising a means for wirelessly communicating with the microchip device elements.
12. (Original) The microchip device array of claim 11, wherein the communicating means comprises a photocell to receive incident light energy.
13. (Original) The microchip device array of claim 1 further comprising an energy storage means.
14. (Original) The microchip device array of claim 13, wherein the energy storage means comprises a capacitor, a battery, or both.
15. (Original) The microchip device array of claim 1 further comprising electrical connections between two or more of the microchip device elements, such that the microchip device elements can be powered or controlled by a common energy source or control source, respectively.

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16. (Original) The microchip device array of claim 1, wherein the reservoirs contain drug molecules.
17. (Original) The microchip device array of claim 1, wherein the reservoirs contains one or more secondary devices for exposure.
18. (Original) The microchip device array of claim 17, wherein the secondary device comprises a sensor.
19. (Original) The microchip device array of claim 18, wherein the sensor is a pressure sensor or a chemical sensor.
20. (Original) The microchip device array of claim 1, wherein the microchip device elements comprise reservoirs which contain drug molecules and at least one reservoir which contains a sensor.
21. (Original) The microchip device array of claim 1, wherein the reservoirs contain molecules selected from the group consisting of diagnostic reagents, catalysts, combinatorial chemistry precursors, and fragrance molecules.
22. (Original) The microchip device array of claim 1, wherein the electrical traces are built into the means for flexibly connecting said device elements.
23. (Original) The microchip device array of claim 1, which comprises flexible, passive release device elements.
24. (Original) The microchip device array of claim 7, which enhances the patency of a tissue lumen or other organ structure in the patient.
- 25-40. (Canceled).